

## The Relation of Perspective Taking and Helping Behavior: the Role of Empathy and Group Status\*

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**Abstract**—To explore the influencing factors of the relation between perspective taking and helping behavior, 46 Chinese university students participated in this study. Following results were shown: both in the ingroup and outgroup, empathic response served to mediate the association between perspective taking and helping behavior; and the group status served to moderate this association, in that the relationship between perspective taking and helping behavior was partially mediated by empathic response in the ingroup and fully mediated through empathic response in the outgroup.

**Key Words:** University student, helping behavior, perspective taking, empathic response, group status

### I. INTRODUCTION

The term “perspective taking” is used here to denote the process of imagining the world from another’s vantage point or imagining oneself in another’s shoes[1]. For a long time now, perspective taking has been considered as a main individual factor that influences individual helping behavior. And helping behavior has been commonly treated as altruism, a voluntary behavior intended to benefit another, which is not performed with the expectation of receiving external rewards or avoiding externally produced aversive stimuli or punishments[2].

Unlike the studies on children, the conclusion that helping behavior is induced directly by perspective taking is controversial in the studies on adolescents. Eisenberg, Zhou, and Koller’s[3] study on Brazilian adolescents found that perspective taking could not directly predict helping behavior without the mediation of empathy. While other studies found that the specific situation was a critical factor of the relationship between perspective taking and helping behavior[4]. Thus, the arguments of the association between perspective taking and helping behavior mainly focus on a)

the views emphasizing individual factors contend that this relationship is mediated by empathy; b) the notions emphasizing situational factors suggest that interpersonal relationship serves to moderate the association.

#### A. Empathy: Influencing the relation of perspective taking and helping behavior

Coke, Batson, and McDavis[5] proposed a two-stage model of empathy mediation, that is, taking the perspective of a person in need increases empathic emotion, which in turn increases helping. Empathy here refers to reactive empathic emotion, which is defined as an effective response more appropriate to another’s situation than one’s own[6]. It is mainly induced by negative emotions such as others’ distress or worries; and also the emotions like concern and compassion produced for caring about other’s welfare and taking other-centered[7]. Perspective taking could increase empathic response, which in turn, produce motivation to help others. Empathic response is an important factor which directly leads to helping behavior.

Eisenberg[8] tested the assumption that empathic response was moral emotions of children and adolescents’ helping behavior by conducting lots of experiments. A number of previous researches also showed that higher empathic level was a significant predictor of adults’ helping behaviors[2][9][10][11][12]. Eisenberg and Miller[2] conducted a meta-analysis for the relationship between empathy and helping behavior. And these results demonstrated that most studies supported the conclusion that there was a positive correlation between empathy and helping behavior except seven researches. The meta-analysis results revealed that the common correlation was 0.17, which was small but highly significant,  $Z=10.24$ ,  $p<.001$ . Moreover, Eisenberg, Guthrie and Cumberland[10] had a longitudinal study on empathy, moral reasoning and helping behavior

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with early adulthood, and found that empathic response (i.e. sympathy) was a significant predictor of self-reports or others' reports of helping behavior at ages 21 to 26. The research on volunteering in Netherland showed that there was a significantly positive correlation between empathy scores and the number of volunteerings[13].

### *B. Group status: Influencing the relation of perspective taking and helping behavior*

Researchers emphasizing interpersonal relationship suggest that whether helping behavior is induced by perspective taking depends on the effect of circumstances. Epley, Caruso, and Bazerman[4] found that in competitive contexts in which considering others' perspectives activates egoistic theories of their likely behavior, leading people to counter by behaving more egoistically themselves; however this reactive egoism is attenuated in cooperative contexts, and helping behaviors are motivated. The study explored by Sturme, Snyder and Omoto[14] showed that individual identity in the group played a moderating role in the relationship between empathy and helping behavior. From this perspective, only believing that there is some degree of similarity between the person in need and themselves can individuals produce even more helping behaviors.

A group-status perspective on helping contends that the ingroup/outgroup relationship between the helper and the person in need ("helpee") plays a crucial role in moderating the psychological processes underlying helping. Ingroup is the group that an individual belongs to, yet outgroup is the group he/she does not belong to. Thanks to necessarily classifying themselves to one kind of groups according to whatever standards like gender, age, race or profession, individuals would regard people as the same group which refers to the ingroup or the different group which refers to the outgroup[15]. It means that ingroup is perceived as similar and related to themselves, while out-group is perceived as dissimilar and unrelated[14]. The research on participants who were asked to lend class notes (borrower is a stranger or familiar) indicated that familiarity was directly related to helping judgment and had a strong association with helping behavior, that is, people were more likely to help ingroup members[16]. Furthermore, emotional responses were easily evoked among familiars, meanwhile, more care and help was offered to familiars at will[17].

Previous researches showed that, it was controversial that helping behavior was induced directly by perspective taking. Scholars emphasizing individual factors focused on the mediated effect of empathic response, and others emphasizing situational factors concerned the moderated effect of group status. This study has probed the influencing factors of the relation between perspective taking and helping behavior from both individual and situational perspectives, which could make its mechanism more clearly.

## II. METHOD

### *A. Participants*

Through convenience sampling, forty-six juniors (27 men and 19 women) at one Chinese university participated

the study in exchange for a beautiful gift. The average age of participants was 20.13 years (SD=1.43).

### *B. Procedure*

Participants were run individually in a quiet laboratory. On arrival, he or she was greeted by experimenter, told he/she would be listening to two recording materials with two listening perspective conditions and then asked to answer some questions.

*Group status manipulation.* To identify the group status, Park and Judd[18] suggested three measuring methods which included perceived similarity. Ostrom and Sedikides[19] found that with higher assessment of similarity to one group, there was higher homogeneity with them. Thus, in the present study, the group status was manipulated by the similarity of identity or profession between characters and participants[14].

In the ingroup status, the recording material as following:

My name is Xu Jia, I am a male/female senior student. I suffered opposition from my families, after applying as a volunteer to participate in the reconstructing activities for the disaster areas two years. I thought that it would affect the organization and myself if I gave up, but if not, I would feel sorry for my families. Thus, now I feel contradictory, stressful, worried, uncomfortable, guilty and helpless.

In the outgroup status, the name and profession of the character is Zhang Jie and doctor, which differs from ingroup status. And in both recording materials, there were some voices from water dropping, birds twittering and cars driving.

To control the sequence effects, half of participants listened to the material ingroup, while the other listened to the material outgroup first. And we played a music named "Morning" between the two recording materials to which they be listening. Meanwhile, to control gender effects, men listened to the recording material in which the character was male, so did women. Moreover, after listening to one of the records, participants were asked how similar the character's identity or profession was to them on seven-points rating scale (1=not at all and 7=extremely). According to previous study, four point stands for similarity, higher than or equal to four means ingroup, and lower than four as outgroup[14].

*Listening perspective manipulation.* The listening perspective was manipulated by instructions[20][21]. In the technical taking condition, the instruction directed participants to focus on the tone quality, contents and types of noise, numbers of pausing and length of the records; while in the perspective taking condition, the instruction directed participants to focus on the thinking and feeling of the characters.

After listening to one of the records, participants were asked to evaluate the extent to which they concentrated on the technical and perspective aspects of the records. Participants answered this questions on a five-point scale (1=not at all, 5=very much), and were asked to fill in the contents they concerned.

*Empathic response to characters.* After listening to each record, participants completed several questionnaires. On an emotional response questionnaire, participants were asked to

indicate how much they experienced each of a number of emotions while listening to the need of the characters whom they would help (1= not at all, 5= extremely). Included among these adjectives were five used in previous research to measure empathic emotional response: warm, tender, compassionate, softhearted, and sympathetic[22]. Coefficient of internal consistency was 0.80 in previous studies[22].

*Hours Volunteers.* To assess helping behavior, we asked participants to choose the hours they would volunteer, but they did not actually have to be done[20][21]. Participants were asked to tick the number of hours they were willing to volunteer freely on the scale. The hours volunteered scaled from 0 to 8 hours, and its unit was half an hour. In present study, the experimenter asked participants whether they wanted to help the characters to analyze and make a decision. If they were not willing to, the experiment would be over after they filled in the personal information, and their hours volunteered scored 0. On the contrary, they would choose the hours volunteered for the characters and then filled in the personal information.

*Equipment.* Jinhua JWM-581C MP3 and earphone

### III. RESULTS AND DISCUSSION

#### A. Manipulation Checks

*Group status.* Because the group status was manipulated by the similarity, we checked the effectiveness of group status manipulation by the result of perceived similarity. And the check of perceived similarity was conducted only in the perspective taking condition. The descriptive statistics of perceived similarity indicated that the manipulation of group status was successful. In the ingroup, the average score of perceived similarity was 5.88(SD = 1.15), which was higher than the middle level (4) in the similarity measure; while in the outgroup, the average score of perceived similarity was 2.45(SD = 0.94), which was lower than the middle level (4). Follow-up paired-samples T test with the average score of perceived similarity also revealed that there was significant variation between in-group and out-group( $t = 12.66, p < .001$ ). Consistent with other studies[14], these results indicate that our group status manipulation was effective.

*Listening perspective.* The results of repeated measure indicated that the manipulation was successful. In the ingroup, participants in perspective taking condition reported concentrating on the thinking and feeling of character( $M = 4.33, SD = 0.09$ ) more than the technical aspects of the records( $M = 1.95, SD = 0.14$ ),  $t(41) = 45.92, p = .000$ ; participants in technical taking condition reported concentrating on the technical aspects of the records( $M = 3.93, SD = 0.12$ ) more than thinking and feeling of character( $M = 2.95, SD = 0.13$ ),  $t(42) = 34.15, p = .000$ . In the outgroup, participants in perspective taking condition reported concentrating on the thinking and feeling of character( $M = 4.21, SD = 0.15$ ) more than the technical aspects of the records( $M = 2.53, SD = 0.17$ ),  $t(42) = 29.99, p = .000$ ; participants in technical taking condition reported concentrating on the technical aspects of the records( $M = 3.94, SD = 0.12$ ) more than thinking and feeling of

character( $M = 2.97, SD = 0.16$ ),  $t(34) = 33.13, p = .000$ . These results showed that different instructions could improve the level of focusing on corresponding aspects. As the previous researches[20][21], these results indicate that our listening perspective manipulation was effective.

In this section, we found that some data were missing. In the ingroup, four participants failed to assess some questions on the scale. In the outgroup, seven participants did not write the concerned contents in technical taking condition and three in perspective taking condition.

*Empathic response.* In order to measure the empathic response, the present study adopted the method of experimental and social psychology, that is, measuring the empathic response induced by the experimental circumstances[20][21][22]. The internal consistent coefficients of the five items referred to empathic response were 0.87 and 0.88 in the ingroup and outgroup respectively, which accords with the standard of psychometrics.

*Hours volunteers.* Paralleling the common method in past researches of altruistic behavior[20][21][23][24], the present study manipulated helping behavior by hours volunteers, which was considered as an effective method.

#### B. Empathy and group status: the influencing factors of the relationship between perspective taking and helping behavior

The results of correlation analysis of perspective taking, empathic response and helping behavior revealed that there was pairwise correlation between them in both ingroup and outgroup(see table 1). But surprisingly, paired-samples T test results presented in Table 2 indicated that there was no significant difference between ingroup and outgroup for perspective taking( $t = 0.25$ ), empathic response( $t = -1.47$ ) and helping behavior ( $t = -0.11$ ). Therefore, to further examine the relations among variables, data were centralized and conducted hierarchical regression analysis for perspective taking, empathic response and helping behavior in the ingroup and outgroup, respectively. In present study, the mediated effect was calculated[25]. In the first regression, helping behavior as outcome variable is regressed on perspective taking as independent variable. In the second regression, empathic response as outcome variable is regressed on perspective taking as predictor variable. In the third regression, helping behavior as outcome variable is regressed on perspective taking and empathic response as predictor variable. The results were presented in table 3, figure 1 and figure 2.

In the ingroup, perspective taking and empathic response could predict helping behavior simultaneously or respectively, and the relationship between perspective

Table 1. Correlation Analysis for Perspective Taking, Empathy Response and Helping Behavior in the ingroup and Outgroup

Variable	Ingroup			Outgroup		
	1	2	3	1	2	3
1 Perspective Taking	-	-	-	-	-	-
2 Empathic Response	0.42**	-	-	0.47**	-	-
3 Helping Behavior	0.55**	0.54**	-	0.40**	0.49**	-

Note. \*  $p < 0.05$ ; \*\*  $p < 0.01$ ; \*\*\*  $p < 0.001$

Table 2. T test Showing the Differences between Ingroup and Outgroup for Perspective Taking, Empathy and Helping Behavior

Group status	Perspective taking		Empathy		Helping behavior		df
	M±SE	t	M±SE	t	M±SE	t	
ingroup	4.33±0.09		13.98±0.63		3.21±0.37		
outgroup	4.02±0.14	0.25	14.86±0.56	-1.47	3.26±0.24	-0.11	41

Note. \*  $p < 0.05$ ; \*\*  $p < 0.01$ ; \*\*\*  $p < 0.001$

Table 3. Hierarchical Regression Analysis for Perspective Taking and Empathic Response

reacted to Helping Behavior in the Ingroup and Outgroup

	Ingroup		Outgroup	
	standardized regression equation	regression coefficient	standardized regression equation	regression coefficient
	the first regression	$y = 0.55x$	$SE=0.31, t=4.19***$	$y = 0.40x$
the second regression	$u = 0.42x$	$SE=0.57, t=2.95**$	$w = 0.47x$	$SE=0.54, t=3.50**$
the third regression	$y = 0.37u$	$SE=0.08, t=2.73*$	$y = 0.30w$	$SE=0.07, t=2.59*$
	$+0.40x$	$SE=0.32, t=2.94**$	$+0.23x$	$SE=0.27, t=1.55$

Note. \*  $p < 0.05$ ; \*\*  $p < 0.01$ ; \*\*\*  $p < 0.001$

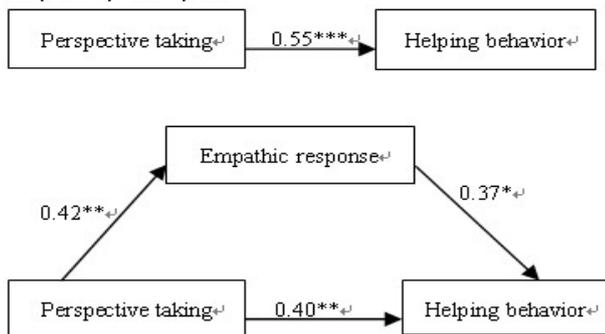


Figure 1. The relationship of perspective taking, empathic response and helping behavior in the ingroup.

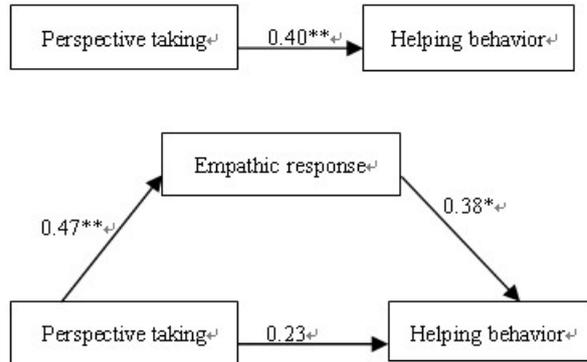


Figure 2. The relationship of perspective taking, empathic response and helping behavior in the outgroup.

taking and helping behavior was partially mediated by empathic response. The value of mediated effects was  $0.42 \times 0.37 / 0.55 = 0.16$ , accounting for 28.25% of total effects. However, in the outgroup, the results of the third regression revealed no evidence that perspective taking was a significant predictor of helping behavior. In this case, the association between perspective taking and helping behavior was fully mediated through empathic response. The value of mediated effects was  $0.47 \times 0.38 / 0.40 = 0.18$ , accounting for 44.65% of total effects. Consistent with previous studies (Batson, Early, & Salvarani, 1997; Batson & Eklund, 2007), these results showed that empathic response was a mediator of the relationship between perspective taking and helping behavior in both ingroup and outgroup.

These results also indicated the moderated effect of group status. That is, group status could not change the level of empathic response and helping behavior, but alter the influencing process of perspective taking, empathic response and helping behavior. In the ingroup, helping behavior occurred directly after university student had understood the thinking and feeling of a person in need (i.e. perspective taking) or further experienced the emotional response to him/her (i.e. empathic response). While in the outgroup, helping behavior occurred only after university student had understood the thinking and feeling of a person in need and further experienced the emotional response to him/her. As previous studies [16][17], these results showed that similarity was easily perceived in the ingroup to increase perspective taking, and then the helping behavior was increased by empathic response.

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